

# Improving Young Children's Behavior With GAMES: Group Contingency Approaches for Managing Elementary-Classroom Settings

“ Valuable time is lost when teachers interrupt instruction to address behavior problems. ”

*Mrs. Covey, a novice teacher in an urban school district, greets a vastly diverse group of spirited children who come bounding into her kindergarten classroom. During the first week of school, there are many challenging behaviors. During circle time, Miquel rolls around on the floor, Alex screams, and Carolyn hides under a table. During center time, Michelle runs around throwing materials and Leo teases his peers about the quality of their work. During snack, Kelly throws food. Mrs. Covey talks to students privately about their behavior, makes them apologize, or calls their parents. Disappointingly, these tactics have failed to produce the desired results.*

Early elementary inclusive classrooms present teachers with demanding responsibilities. The wide range of student backgrounds, ability levels, and previous school experiences require a well-managed classroom that maximizes instructional time. Valuable time is lost when teachers interrupt instruction to address behavior problems. In fact, teachers reported spending more time addressing disruptive behaviors than they thought they should (Beaman, Wheldall, & Kemp, 2007). In addition, most teachers who left the profession reported classroom

management challenges as the reason for leaving (Stauffer & Mason, 2013). The most important benefit of a well-managed classroom is increased student achievement (Burke, Oats, Ringle, Fichtner, & DelGaudio, 2011; Murray, Rabiner, Kuhn, Pan, & Sabet, 2018). One powerful and empirically supported classwide practice for preventing or reducing problem behaviors, and possibly decreasing the need for individual behavior plans, is using group contingencies of reinforcement.

## Group Contingencies of Reinforcement

Group contingencies of reinforcement require the delivery of a common consequence contingent on the behaviors of each member of a group (independent group contingency), one member or subset of a group (dependent group contingency), or all members of a group (interdependent group contingency; Cooper, Heron, & Heward, 2007). Figure 1 illustrates each of the three types of group contingencies.

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 One powerful and empirically supported classwide practice for preventing or reducing problem behaviors, and possibly decreasing the need for individual behavior plans, is using group contingencies of reinforcement.”

Research demonstrates that group contingencies are effective for increasing appropriate behaviors and decreasing disruptive behaviors of young children in classroom settings (e.g., Caldarella, Williams, Hansen, & Wills, 2015; Murphy, Theodore, Aloiso, Alric-Edwards, & Hughes, 2007). Prior to implementing group contingencies, it is important to identify if students are capable of performing the desired behaviors. If not, teachers should model the behavior, demonstrate it with examples and nonexamples, and present frequent opportunities for practice. Directly teaching students the behaviors that will be reinforced within the group contingency will increase the likelihood of success.

When creating a group contingency, teachers should decide which group contingency is best for their class, identify target behaviors, select reinforcers, create a data collection system, and teach the group contingency to the students (Yell, Meadow, Drasgow, & Shriner, 2013). This article provides early elementary teachers with strategies for managing their classrooms with independent, dependent, and interdependent group contingencies. The following section delineates procedures for implementing the three types of GAMES: Group contingency Approaches for Managing Elementary-classroom Settings.

## Three Types of GAMES

### Independent Group Contingencies

An independent group contingency is a system in which the same behavioral requirements are in

effect for the whole class, but students contact reinforcement based on their individual performance (Cooper et al., 2007). An advantage of this contingency is that individual reinforcement is unaffected by other students' behaviors.

### *Token economies*

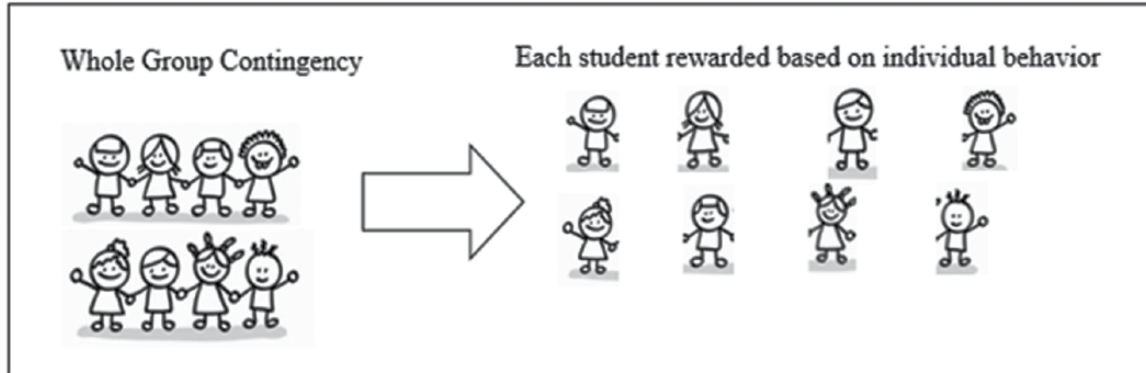
A token economy is an independent group contingency that can target many behaviors simultaneously (e.g., following directions, sharing materials). Each student earns reinforcers (i.e., tokens) based on his or her individual performance. Tokens are later exchanged for back-up reinforcers. Table 1 shows a menu of possible back-up reinforcers.

Token economies have been shown to increase appropriate behavior and academic engagement in kindergarten classrooms (e.g., Shogren, Lang, Machalicek, Rispoli, & O'Reilly, 2011). When implementing a token economy, teachers must decide how many tokens to deliver and the rate of exchange for back-up reinforcers. Teachers should plan to deliver tokens intermittently throughout the day. In general, the younger the students, the more frequently they should receive reinforcement. In addition, if a new skill is introduced, reinforcement should occur continuously at first. Once the student has acquired the skill, reinforcement can be delivered intermittently to maintain the skill. To prevent loss of motivation due to possible satiation, teachers must also be cautious about delivering too many tokens.

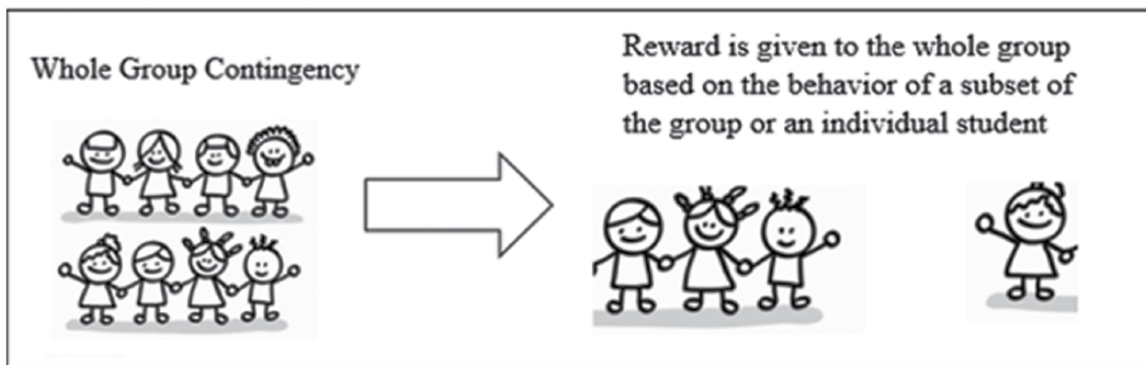
Another important decision is when and how often teachers allow students to exchange their tokens for

**Figure 1**  
Three types of group contingencies

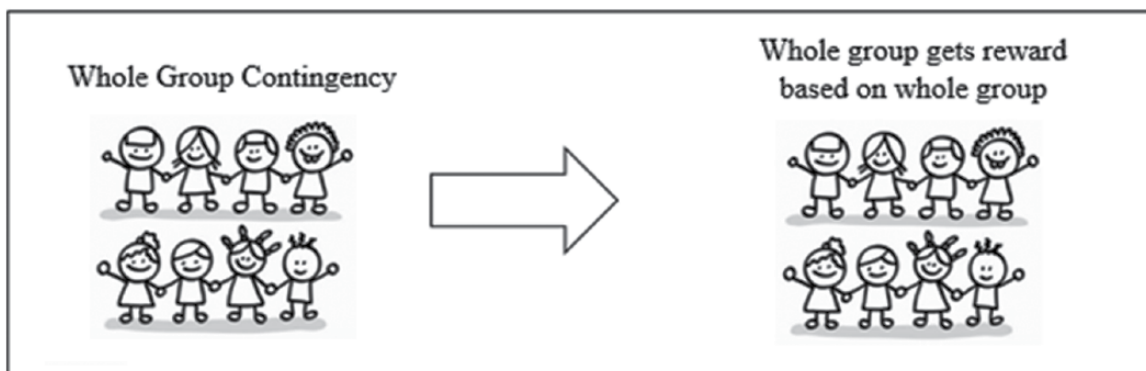
### Independent Group Contingency



### Dependent Group Contingency



### Interdependent Group Contingency



Note. The clip art used to make these images came from: Happy Kids (clipart). (no date). Retrieved from: <http://runsickcattle.com/WDF-1074799.html>.

back-up reinforcers. Teachers can schedule specific times each day for exchanging tokens (e.g., after lunch). Students who engage in problem

behaviors frequently might benefit from exchanging their tokens as soon as their token boards are complete. Teachers can also make the exchange

**Table 1**  
Menu of Whole Group and Individual Reinforcers

Whole group	Individual reinforcers
Free choice time	Chew gum
Listening to a favorite song	Play on iPad
Watching an educational video: ABC song video, number video, shape video	First choice at centers
Movement break	Feed class pet
Snack party	Water plants
Dance Song-Head, shoulders, knees, and toes, Cha Cha Slide, Cupid Shuffle	Pick first book at library
Movie and popcorn	Doing favorite classroom job
Extra recess	Break Card
Extra time at centers	Use teachers chair during story time
Group Game: Simon Says, Bingo, Tic Tac Toe, Heads Up 7 Up, Four Corners	Move next to a friend
Exercises	Lead a classroom activity
Pajama day	Store Items: balls, pencils, pens, erasers, dollar store toys
Special recess item: jump rope, chalk, bikes	Stickers
Fun socks day	Balloon stress ball
Crazy hair day	Use fun pens
	Using bubbles
	Flexible seating choice
	Sit with classroom mascot (stuffed animal)
	Sit next to the teacher at snack time or lunch time

time unpredictable to students which may increase their motivation to engage in appropriate behaviors more frequently. Ultimately, these decisions should be based on student data. For further guidance, Cooper et al. (2007) explain procedures of establishing a ratio for earning back-up reinforcers. The following are suggestions for making token economies more feasible and practical in early elementary school classrooms.

- Ten Frame
  - Step 1: Affix a 10-frame sticker card to each student's desk.
  - Step 2: Deliver a sticker immediately following desired behaviors.
  - Step 3: When the card is full, allow students to exchange it for a back-up reinforcer.
- "I Am Working For" Board
  - Step 1: Affix an "I am

working for" chart to each students' desk with five to 10 blank boxes below the "earn box."

- Step 2: Allow students to pick from a collective board of possible back-up reinforcers and place it on their chart.
  - Step 3: Deliver a check mark each time you see the student engaging in a target behavior.
  - Step 4: When the chart is filled, it can be exchanged for the selected back-up reinforcer.
- Classroom Store
    - Step 1: Create a classroom store with items listed for a predetermined price.
    - Step 2: Deliver fake money to students when they are engaging in desired behaviors (use a sticker chart or stamp card if students are not able to keep track of their "money").
    - Step 3: Choose a time of day

when the store is “open” and allow students to exchange their money for back-up reinforcers.

### *Premack Principle*

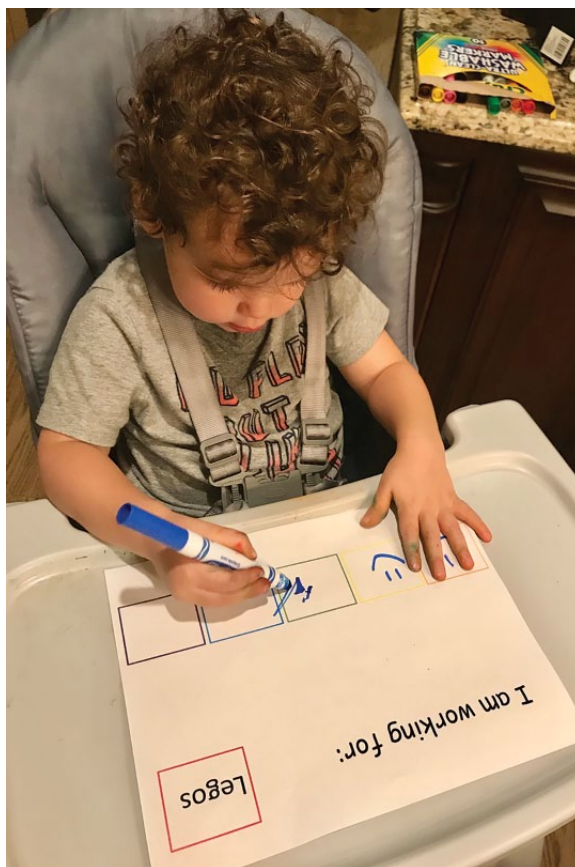
When using the Premack Principle (Premack, 1962), the teacher reinforces completion of less desired activities with more desired activities (e.g., “When you finish your math assignment, you can play on the Ipad.”). Incorporating the Premack Principle into independent group contingencies can increase student compliance and serve as an additional prompt for students who need it. For example, “When you complete the letter identification activity, you may go to a free choice center.” The teacher can provide the

same contingency to all students, but reinforce individually. The following is an example of using the Premack Principle within an independent group contingency.

- Participation During Circle Time
  - Step 1: Tell the students if they raise their hand quietly and answer a question they can do their favorite dance move for the class.
  - Step 2: Call on students who raise their hand without shouting out. Be sure to call on many different students to increase their opportunities to earn the reinforcer.
  - Step 3: Allow individual students to show the class their favorite dance move.

### **Dependent Group Contingencies**

A dependent group contingency is a system in which the reinforcer is delivered to the whole class based on the performance of one student or a subgroup of students (Cooper et al., 2007). An advantage of a dependent group contingency is that it allows a single student or small group of students to experience approval when they earn reinforcers for their classmates (Williamson, Campbell-Whatley, & Lo, 2009). However, a disadvantage is possible peer pressure or social punishment if the “hero student” does not earn the reward. For this reason, teachers should not reveal the target student’s or group’s identity unless the contingency is met. Teachers should also target several behaviors simultaneously (e.g., sitting with legs crossed, quiet mouth, hands folded) so the identity of the target student is not obvious. The following are examples of dependent group contingencies.

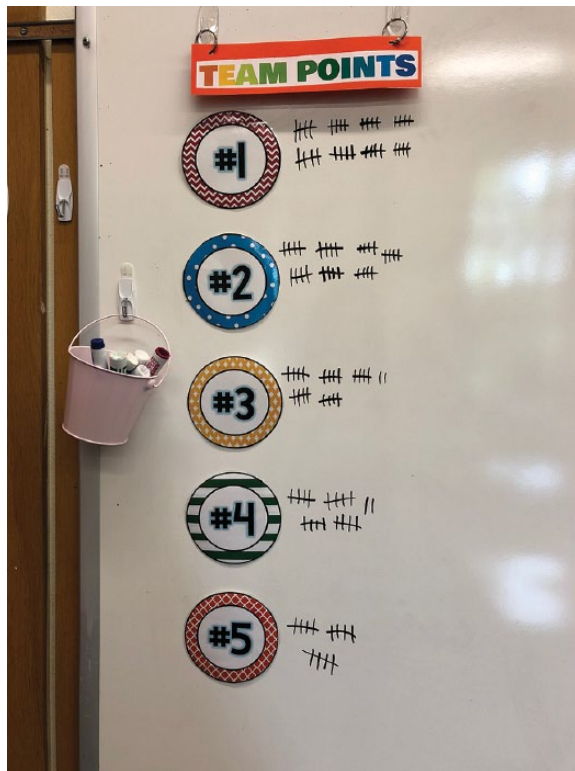


- Hero Strategy
  - Step 1: Select a couple of target behaviors (e.g., using quiet voice and cleaning up).
  - Step 2: Tell the students the whole class will be rewarded if one student or group of students uses quiet voices during center time and cleans up their materials after, but they will not know who until after the activity.
  - Step 3: If the selected student or group meets the contingencies, provide the reinforcer and reveal the name(s) of the student or group members. Either randomly select a name or deliberately select a specific student who needs to be a hero.
- Individualized Level of Performance for “Hero” Student
  - Step 1: Select a student who shouts out frequently during carpet time (e.g., 10 times).
  - Step 2: Tell the whole class they will be rewarded for raising their hands and waiting to be called on during carpet instruction.
  - Step 3: If the selected student or students decrease their number of shout outs (e.g., less than 10 times), provide the reward to the whole class.
  - Step 4: Over time, gradually reduce the number of times the “hero student” can call out in order for the whole class to obtain the reward.

### Interdependent Group Contingencies

With interdependent group contingencies, every student must engage in the target behavior to access the reinforcer (Cooper et al., 2007). This contingency can help build a culture of camaraderie. However, teachers should plan for the possibility that a challenging student may prevent the whole class from accessing the reinforcer (see *Which Group Contingency Should I Use?*). The following are examples of how to implement interdependent group contingencies.

- Marble Jar
  - Step 1: Provide instructions, for example, “Please put your lunch bags away and return to your seat, if you can do this in less than 2 min, a marble goes in the jar.”
  - Step 2: Set a timer for 2 min.
  - Step 3: If all students are in their seats when the timer rings, drop a marble in the jar and provide praise to the whole class (e.g., “Great job following directions!”).



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- Step 4: Continue this contingency with other transition behaviors until the marble jar is full. Then provide a back-up reinforcer to all students (see Table 1).
- Star Chart
  - Step 1: Affix a classroom star chart to the chalkboard.
  - Step 2: Tell the students they can earn a star when everyone follows directions.
  - Step 3: When the star chart is full, deliver a reward to the whole class.
  - Step 4: Throughout the day, provide students with instructions (e.g., “Go get your activity boxes and sit on the carpet.”), and provide a star on the chart if all students comply.
  - Step 5: When the star chart is full, allow the students to choose a reward (e.g., from a prize box) or provide the whole class with the same reward (e.g., extra recess).

### Variations of Group Contingencies

#### *Mystery motivator*

A Mystery Motivator (Robichaux & Gresham, 2014) is a behavioral contingency in which the reward is a surprise. It can be used with any of the three types of group contingencies. The reward can be revealed by opening an envelope, pulling a random prize note out of a hat, or spinning a prize wheel. The following is an example.

- Step 1: Announce to the class that if everyone follows directions (the first time they are given) 10 times that day, they

will earn a surprise or mystery reward.

- Step 2: Show the students the envelope containing the paper on which the secret reward is written (e.g., “play Simon Says”).
- Step 3: Throughout the day, tally on the board each time the whole class follows directions the first time. If students do not follow directions, remind them about the mystery motivator.
- Step 4: At the end of the day, count the number of tallies earned and, if the criterion is met, open the mystery motivator envelope, read what the reward is, and deliver it to the students.

#### *Good behavior game*

A group contingency with evidence of effectiveness in general education classrooms is the Good Behavior Game (McGoey, Schneider, Rezzetano, Prodan, & Tankersley, 2010). The teacher divides the students into two or three teams and awards points to each team throughout the day for good behavior. Alternately, the whole class can be one team competing against the teacher. Each time the students engage in appropriate behavior, their team gets a point, and when they engage in inappropriate behavior, the teacher gets a point. The following are steps for implementing this contingency with the class as one team.

- Step 1: Select a few appropriate specific behaviors (e.g., be polite, follow directions, wait your turn) and write those behaviors on the board.
- Step 2: Provide students with examples and nonexamples of those behaviors and guide their responses. For example, “When

you say ‘excuse me,’ are you being polite?” (“Yes!”), and “When you say ‘move out of my way,’ are you being polite?” (No!).

- Step 3: Next, tell the students they will be competing with the teacher for points.
- Step 4: Draw a two-column score board and write “Teacher” and “Students” (or use pictures indicating teacher and students) above each column.
- Step 5: Tell the class that they can earn points for engaging in the behaviors written on the board and the team with the most points earns a reward at the end of the day.
- Step 6: At the end of the day, count the points tallied in each column and deliver the reward to the students if they have more points than the teacher.

## Considerations for Diverse Learners

When implementing any classwide intervention, teachers should consider the needs of all students, including those with diverse learning needs who may require additional support to be successful. Fortunately, group contingencies can be flexibly implemented to address many different students’ behaviors at the same time. For example, teachers can use a group contingency for the whole class while providing another independent contingency for students who persistently struggle to engage in appropriate behaviors. In addition, teachers can provide supplemental prompting, scaffolding, feedback, and support as needed for each student.

It is important to assess the ability level of the students to

perform the target behaviors and modify the contingency for students not yet able to reach the ideal group criteria. Teachers should be cautious about using a group contingency that may single out a student identified with a disability. For example, if a student with autism spectrum disorder engages in echoic behavior, the teacher should accommodate the student by modifying the criterion for “quiet mouth during work time,” so that student can be successful as well. Teachers should avoid using the hero strategy if it might be obvious which student did not meet the expectation. However, teachers could utilize the hero strategy in which the target student is part of a group of students and behavioral expectations are set for the group instead of just one particular student. In this situation, the student who struggles with meeting the expectation can still contact reinforcement as one member of a group of students.

When modifying group contingencies for students with special needs, teachers should always incorporate the accommodations listed on individualized education programs (IEPs) and 504 plans (e.g., visual aids, additional prompts, or proximity to the teacher). For dual language learners, teachers should consider a group contingency that offers a peer support procedure. So, if a student has difficulty understanding the contingency, there is an assigned peer to help.

## Which Group Contingency Should I Use?

When determining which group contingency may be the best fit for a



**Table 2**  
Benefits and Cautions for Each Group Contingency

	Benefits	Cautions
Independent	Each student is accountable and contingency is not affected by the behavior of others	Might not be the best contingency for building teamwork May be difficult to deliver rewards on an individual basis
Dependent	Enables individual students to experience a sense of accomplishment when they earn something for the whole group May be more effective for systematically decreasing challenging behavior of individual students	Failure to earn the reward for the whole group may invite negative interactions from peers Be sure the hero student is set up for success and/or keep the identity of the hero student private unless he or she meets the contingency
Interdependent	No individual student is singled out Can motivate positive peer pressure and a sense of teamwork May be easiest to implement	Probably not effective if one or a couple of students struggle with engaging in appropriate behaviors on a consistent basis Some rewards may not be motivating or reinforcing to all students. Try to have a bank of rewards and rotate rewards regularly.

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particular classroom, teachers should consider several benefits and cautions for each type (see Table 2).

Classroom culture, feasibility, and individual student needs should factor into decisions about which group contingency to select. Encouraging a classroom culture of teamwork and positive peer support may be best accomplished with an interdependent group contingency. In addition, teachers might prefer interdependent contingencies because of the convenience of providing the same reinforcers to the whole class at the same time. However, if one or two students struggle with engaging in appropriate classroom behaviors, a whole group contingency may not be achieved and reinforced frequently enough to be effective. In this situation, an independent group contingency is probably a better choice.

Teachers should consider using dependent group contingencies for

students who are motivated by earning rewards for the whole class. When using a dependent group contingency, teachers should be sure any potential hero students are set up to be successful. Depending on the activity, teachers may consider implementing more than one group contingency throughout the day. However, teachers should not implement more group contingencies than is feasible.

The most effective group contingencies will be unique for each classroom. Group contingencies should be implemented until the data show important behaviors are at desired levels. Teachers can continue using group contingencies intermittently to help students maintain appropriate behaviors over the course of school year. It may be necessary to consult with the school psychologist if any students exhibit high rates of challenging behaviors

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over an extended period of time that interfere with their learning. In this case, an individual behavior plan might be needed.

### What Happens if My Students Are Not Earning Reinforcers?

If students are not earning reinforcers, it is possible that the performance criterion to earn reinforcement is set too high (e.g., zero talk outs all day). Teachers should keep the initial performance criterion for earning reinforcers low so students may contact reinforcement immediately and frequently. When student data indicate desired changes in target behaviors, teachers can gradually increase the criteria for earning reinforcers. Continuous monitoring of student data will show the

effectiveness of group contingencies for individuals and provide a basis for deciding if any adjustments are needed to facilitate student success. The frequency of student access to the reinforcer should be based on their ability to earn the reinforcer.

Some students might not be earning reinforcers because they do not understand the contingency or they need a prompt to remember the contingency is in effect. For this reason, it is a good idea to clearly communicate the group contingency to the students each day prior to implementing it. For example, the teacher could say “All right class, we will be playing the game (insert name of game/strategy). You have the opportunity to earn (insert reinforcer). Try your best to follow all the game rules, if we do not earn the reinforcer today we will try our best again tomorrow.” Stating the rules of the group contingency each day prior to implementing it can also help mitigate any disruptive behaviors that might result if the reinforcer is not obtained.



### Partnering With Families

Home-school collaboration is an important key to student success (Tran, 2014). When teachers implement an intervention, they should share with parents the strategies they are using. This can be accomplished by sending parents a monthly newsletter. The newsletter can highlight the reinforcers students have been earning and perhaps mention some of the hero students. To facilitate home-school communication, teachers can incorporate home-school notebooks for all students, especially for students who might need additional praise and other reinforcement at home. A

home-school notebook may also allow parents to share strategies they use in the home.

During open houses and parent teacher conferences, teachers can show parents some of the visuals and progress monitoring materials they use for their group contingency so parents have a better idea of how the strategy is utilized in the classroom context. In addition, teachers can solicit parent advice or recommendations for possible reinforcers for their child that could be included as back-up reinforcers. For example, if the class earns a movie day, the teacher can ask the parents for movie recommendations and then have the students vote on one of the top three suggestions. Overall, it is important for teachers to communicate with parents about the strategies they are using and include parents as much as possible as it can promote greater levels of student success (Domina, 2005; Rimm-Kaufman, Pianta, Cox, & Bradley, 2003).

*“Shh, use your quiet voice,” Miquel whispered to Leo and Michelle, “so we can have extra recess today if Mrs. Covey picks one of our names.” Miquel knew that he followed all of the rules during center time—he used a quiet voice, stayed seated, and kept his hands to himself.*

*Everyone watched Mrs. Covey open the envelope, look at it, smile, and say, “The hero today is Miquel! He followed the rules during center time so everyone gets five extra minutes of recess!” Mrs. Covey saw the big smile on Miquel’s face while his peers said, “Yay! Thanks Miquel!” and “Good job, Miquel!”*

*Mrs. Covey continued using the hero group contingency based on the data she collected. Overall, her students showed increased on-task behavior and decreased disruptions. Best of all, the students prompted each other to follow the rules and praised each other. They were always excited about the possibility of earning a reward whenever Mrs. Covey opened the envelope.*

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